

AMENDMENTS TO THE SPECIFICATION:

Please cancel the originally-filed Abstract of the Disclosure, and add the accompanying new Abstract of the Disclosure which appears on a separate sheet in the Appendix.

Please cancel the paragraph beginning on page 1, line 3, and add the following new paragraph:

-- The present invention relates to an apparatus and to a method and to a method capable of generating infra-, audible- and ultrasound waves, by means of which the treatment and curing of patients suffering from vascular disease can be accomplished via introducing sound waves generated in a given frequency range into the human system in an optimal manner. In particular, the apparatus according to the invention relates to the treatment/curing of diseases (for example vasoconstriction, decubitus, ischaemia, etc.) caused by circulatory deterioration.--

Please cancel the paragraph beginning on page 4, line 4, and add the following new paragraph:

-- In one aspect, the present invention provides such an apparatus for treating patients suffering from vascular disease by means of a combination of infra-, audible- and ultrasound waves that comprises a treating head emitting sound waves with frequencies ranging from 1 Hz to 100 kHz and introducing these sound waves through a coupling medium into a body portion to be treated. The apparatus also comprises a suitable electronics

connected to said treating head for energizing said treating head to emit said sound waves and a control panel connected to said electronics to choose the electronic waveform of the energizing. Furthermore, the apparatus according to the present invention optionally also comprises a heating device and a thermometer for measuring the temperature of the body portion to be treated, wherein the heating device and the thermometer are both connected to the electronics equipped with the control panel. From now on sound waves with frequencies ranging from 1 Hz to 100,000 Hz generated for treating purposes by the apparatus according to the invention will be referred to in brief as Parasound waves.--

Please cancel the paragraph beginning on page 5, line 14, and add the following new paragraphs:

-- In one of the preferred embodiments of the apparatus according to the present invention the treating head during a single treatment unit emits sound waves with frequencies continuously increasing within the period of 1 s to 200 s of the treatment unit from 1 Hz to 200 Hz at a rate of 1 Hz per seconds, then within the period of 200 s to 208 s of the treatment unit from 200 Hz to 1,000 Hz at a rate of 100 Hz per seconds, and finally within the period of 208 s to 307 s of the treatment unit from 1,000 Hz to 100,000 Hz at a rate of 1,000 Hz per seconds.

In another aspect, the present invention provides a method for treating patients suffering from vascular disease by means of a combination of infra-, audible- and ultrasound waves, wherein the method comprises the steps of providing an apparatus comprising a treating head emitting sound waves with frequencies ranging from 1 Hz to 100 kHz and introducing said sound waves into a patient's body portion to be treated, an electronics connected to said treating head for energizing said treating head to emit said sound waves, and a control panel connected to said electronics to choose the electronic waveform of the energizing; arranging a coupling medium on said body portion; bringing said treating head into contact with said coupling medium; choosing the waveform of the energizing; and applying said sound waves on said body portion via energizing said treating head by the electronics in accordance with the chosen waveform.--

Please cancel the paragraph beginning on page 6, line 19, and add the following new paragraph:

-- Figures 2A and 2B show in rear and front views, respectively, one possible embodiment of the treating head 15. According to this embodiment, the main portion of the treating head 15 is a base plate 28 having a metallic planar treating surface 26 embedded into a holder 27 which is preferably made of a plastic material. Base plate 28 is connected to the apparatus 10 via electric lead(s) (not

shown in the drawing). Base plate 28 is preferably made of aluminium, however it can be prepared from any other material of good electric conductivity. In the present case the base plate 28 has a disc shape which is about 10 millimeters in thickness and about 65 millimeters in diameter. The outer diameter of the treating head 15 is about 75 millimeters. Base plate 28, however, can be formed with any shape, eg. With a shape that fits the body portion 22 to be treated in the best possible manner.

Exciting means 29 generating the Parasound waves during the treatment in accordance with the waveform output by the electronics 12 are mounted onto the face of the base plate 28 opposite to the treating surface 26. The exciting means 29 of the embodiment of the treating head 15 at issue are cut away from a piezoelectric crystal with a suitable crystal axis orientation; hence, they emit the Parasound waves on basis of the inverse piezoelectric effect. The present embodiment of the treating head 15 preferably contains four exciting means 29. Preferably, the exciting means 29 also have a disc shape with a diameter of 25 millimeters. In general, exciting means 29 have such a shape and are arranged in such a geometry relative to each other that the frequency of the sound wave appearing as the superimposition of sound waves emitted by the exciting means 29 and to be fed into the

body portion 22 to be treated could take any value within the interval ranging optionally from 1 Hz to 100,000 Hz. Accordingly, if eg. Four disc shaped exciting means 29 are used, these are arranged on the base plate 28 having also a disc shape in such a manner that (i) a single peripheral point of each exciting means 29 falls just on the contour of the base plate 28, (ii) the centers of the exciting means 29 define the vertices of a square that falls with its total area on the base plate 28, and finally (iii) the exciting means 29 do not abut each other. Obviously, by the application of more than four symmetrically arranged exciting means it is also possible to prepare a treating head that maximally satisfies the requirements of the therapy, i.e. which is capable of generating Parasound waves within just the desired frequency range.--